

REMARKS

Entry of the foregoing and reconsideration of the subject application are respectfully requested in light of the amendments above and the comments which follow.

As correctly noted in the Office Action Summary, claims 2-10, 12, 14, 15 and 17-22 are pending. By the present response, claims 14, 18 and 22 have been amended, claims 9, 10 and 21 canceled, and claims 23-25 added. Thus, upon entry of the present response, claims 2-8, 12, 14, 15, 17-20 and 22-25 remain pending and await further consideration on the merits.

Support for the foregoing amendments can be found, for example, in at least the following locations in the original disclosure: the original claims, the figures and the specification, paragraphs [0014], [0025], and [0031]

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 2-10, 12, 14, 15, 17-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. WO 00/18583 to Trovinger et al. (hereafter "WO '583") in view of U.S. Patent No. 4,304,561 to Shingo (hereinafter "Shingo" and U.S. Patent No. 4,053,150 to Lane (hereafter "Lane") on the grounds set forth in paragraph 2 of the Official Action. For at least the reasons noted below, this rejection should be withdrawn.

The presently claimed invention is directed to folding sheet material. Figure 1A shows an exemplary embodiment of a sheet folding apparatus 100. The sheet folding apparatus 100 includes a fold blade 164 having a shape that includes a rounded folding surface 164b and a longitudinal axis along the x-axis of Figure 1A.

Apparatus 100 also includes at least one fold roller. Figures 2A and 2B show exemplary embodiments of a rounded fold blade. At least in Figure 2A, the rounded fold blade has an adjustable perimeter. That is, the separate portions 266 can be moved relative to one another to expand the circumference of the rounded fold blade 264. Figures 3A-3C illustrate exemplary embodiments with two fold rollers 306. Drive means 180 moves at least one of the fold blade and a fold roller into operable communication with one another such that the fold roller passes around the circumferential rounded folding surface. As shown in Figure 3C, and described in paragraph [0026] of the specification, the operation of the rounded fold blade and the fold rollers fold the sheet "to conform to the shape of the fold blade." Further, the shape of the rounded fold blade adjusts to vary the rounded fold based on a position of the sheet in the booklet (see paragraph [0031]).

The above-noted features are broadly encompassed by independent claims 14, 18 and 22. Claim 14 recites that a method for folding a sheet of material comprises the steps of, *inter alia*, feeding a sheet material into an area between a fold roller and a fold blade, the fold roller comprising at least two fold roller elements biased toward each other in a first plane, the fold blade having a longitudinal axis in a first direction, and the fold blade having a shape that includes a rounded folding surface, and moving the fold roller and the fold blade relative to one another to form a rounded fold in the sheet. The longitudinal axis of the fold blade moves from a first position vertically below an axis of the fold rollers to a second position vertically above the axis of the fold rollers, the fold rollers move along a circumferential surface of the rounded folding surface, and the rounded fold conforms to the shape of the fold blade.

Claim 18 recites that an apparatus for folding sheet material comprises, *inter alia*, a fold blade having a shape that includes a rounded folding surface and a major axis in a first direction, at least two fold rollers, wherein each fold roller has a contacting surface and a major axis in the first direction and a plane contains the major axis of the first fold roller and the major axis of the second fold roller, and drive means for moving at least one of the fold blade and the plurality of fold rollers into operable communication such that the major axis of the fold blade moves from a first position vertically below the major axes of the fold rollers to a second position vertically above the major axes of the fold rollers, while simultaneously the contacting surface of the two fold rollers maintain a pressure against the rounded fold surface of the fold blade to form a rounded fold in the sheet material. At least one of a size and a shape of the rounded folding surface is adjustable.

Claim 22 recites a method for folding a sheet of material, comprising, *inter alia*, the steps of feeding a sheet material into an area between a fold roller and a fold blade, the fold roller comprising at least two fold roller elements biased toward each other in a first plane the fold blade having a longitudinal axis in a first direction and the fold blade having a shape that includes a rounded folding surface, and moving the fold roller and the fold blade relative to one another to form a rounded fold in the sheet. The longitudinal axis of the fold blade moves from a first position vertically below an axis of the fold rollers to a second position vertically above the axis of the fold rollers, the fold rollers move along a circumferential surface of the rounded folding surface. The rounded folding surface is adjustable and the method comprises the step of adjusting at least one of a size and the shape of the rounded folding surface to change a perimeter of the rounded fold blade.

The rejection based on the hypothetical combination of the disclosures in contained *Trovinger*, *Lane*, and *Shingo* is improper because the rejection does not establish a *prima facie* case of obviousness. There are three basic criteria to establish a *prima facie* case of obviousness. First, there must be a suggestion or motivation to modify the reference or to combine the teachings. Second, there must be a reasonable expectation of success for the proposed modification or combination. Third, the reference must teach or suggest all of the claim limitations. See, e.g., M.P.E.P. §§2143-2143.03. Here, the rejection has not established a *prima facie* case of obviousness because at least the third element, e.g., teaching or suggesting all of the claim limitations, has not been met.

Specifically, some of Applicants' independent claims recites that the fold rollers move along a circumferential surface of the rounded folding blade (claims 14 and 22) and maintain a pressure against the rounded folding surface of the fold blade (claim 18). There is simply no corresponding disclosure, teaching or suggestion for this feature in *WO '583*, *Shingo*, and *Lane*. For example, the fold rollers in *WO '583* translate along the length of the straight edged fold blade and do not move along a circumferential surface nor maintain a pressure against the rounded folding surface. *Shingo* is complete devoid of fold rollers, does not adjust the fold blade to obtain different size folds and it is not at all clear how one would incorporate such a fold blade into any of the other references to arrive at the presently claimed apparatus and method. Finally, *Lane* merely inserts a knife edge fold blade to fold the paper and does not have a rounded surface, a circumferential surface or an adjustable feature.

From the above, it is respectfully asserted that the rejection has not established a *prima facie* case of obviousness because there is no teaching or suggestion of all of the claim limitations. Accordingly, it is respectfully requested that the rejections be withdrawn.

In addition, some of the rejected claims have an adjustable feature related to the fold blade. The Examiner has dismissed the claim limitation of "adjustability" (see, for example, claims 18 and 22), stating that "adjustability, where needed, is not a patentable advance" and citing to In re Stevens. Applicant's representative has reviewed this precedence. In the In re Stevens case, the prior art showed adjustable features. The court then reasoned that the claimed adjustable feature, which substituted a different pivot mechanism for the prior art adjusting feature, was "no more than a logical step." In re Stevens, 212 F.2d197, 198 (CCPA 1954). From this review, it appears that one feature of such a finding is the establishment of need and also of prior knowledge to make adjustable.

Here, the examiner cites to In re Stevens, but misapplies its holding. There has simply been no showing by the Examiner of any element in the prior art with adjustable rounded fold blade as claimed. Furthermore, the Examiner has not shown, or even alleged, that there is known a need for such adjustability. When compared to the level of disclosure in the prior art that gave rise to the conclusion in In re Stevens, it is respectfully noted that the present rejection does not establish the required basis for concluding that "adjustability, **where needed**, is not a patentable advance." Office Action dated July 1, 2004, page 3, *emphasis added*). Accordingly, withdrawal of the rejections based on this reasoning is respectfully requested.

For at least this further reason, the rejection of the claims addressing this feature should be withdrawn.

The remaining claims depend directly or indirectly from independent claims 14, 18 or 22. The rejection of the dependent claims should be withdrawn for at least the same reasons as discussed above with respect to the independent claims.

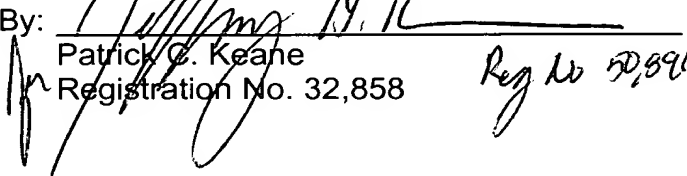
CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

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